

Appln. Serial No. 09/938,159
Amendment Dated April 25, 2005
Reply to Office Action Mailed February 25, 2005

CURRENT LISTING OF THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1 1. – 20. (Cancelled)

1 21. (Previously Presented) A data storage system comprising:

2 a data storage system housing having an opening, and first and second elongate reference
3 rails located adjacent the opening;

4 a media storage device for storing a plurality of data media, the media storage device
5 comprising a media storage device housing configured to receive the plurality of data media, the
6 housing having a top, a bottom and opposing ends, the media storage device housing having first
7 and second elongate alignment grooves, each of which is adapted to slidably engage with a
8 respective one of the first and second elongate reference rails such that the media storage device
9 may be inserted into and removed from the data storage system housing by slidably engaging the
10 elongate reference rails and the elongate alignment grooves and guiding the media storage device
11 through the opening of the data storage system housing along a longitudinal axis of the media
12 storage device housing, the opposing ends of the media storage device housing being located
13 along the longitudinal axis, the data media being inserted into and removed from the media
14 storage device housing along an axis transverse to the longitudinal axis;

15 a data exchange device for reading data from the data media; and

16 a media handling system for transferring data media from the media storage device to the
17 data exchange device.

1 22. (Previously Presented) The data storage system of claim 21, wherein the media storage
2 device further comprises a locking plate attached to the media storage device housing and
3 configured to engage a locking mechanism located in the opening in the data storage system
4 housing.

1 23. (Cancelled).

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1 24. (Previously Presented) The data storage system of claim 21, wherein the housing of the
2 media storage device is molded from plastic.

1 25. (Previously Presented) The data storage system of claim 21, wherein the media storage
2 device housing further comprises a handle configured to enable an operator to apply a force
3 substantially parallel to the first elongate alignment groove such that when the first elongate
4 alignment groove engages the first elongate reference rail the media storage device may be
5 inserted and removed from the data storage system housing.

1 26. (Previously Presented) The data storage system of claim 21, wherein the media storage
2 device housing has opposing sides located between the top and the bottom and extending parallel
3 to the longitudinal axis, at least one of the opposing sides being configured to receive the data
4 media.

1 27. (Previously Presented) The data storage system of claim 21, further comprising:
2 a spring mechanism comprising a first end and a second end, the first end being
3 operationally attached to the top of the media storage device housing; and
4 a finger attached to the second end of the spring mechanism;
5 wherein the spring mechanism and the finger are configured to engage the data media.

1 28. (Previously Presented) The data storage system of claim 26, wherein the media storage
2 device housing comprises a plurality of slots defined by a plurality of dividers positioned in
3 spaced-apart relation within the media storage device housing.

1 29. (Previously Presented) The data storage system of claim 27, wherein the spring
2 mechanism comprises a metallic strip.

1 30. – 34. (Cancelled)

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1 35. (Previously Presented) The data storage system of claim 21, further comprising means
2 for applying a force substantially parallel to the first elongate alignment groove.

1 36. (Previously Presented) A data storage system comprising:
2 a data storage system housing having an opening, and reference rails located adjacent the
3 opening; and
4 a media storage device for storing a plurality of data media, the media storage device
5 comprising a media storage device housing configured to receive the plurality of data media, the
6 housing having opposing ends, the media storage device housing having alignment grooves, each
7 of which is adapted to slidably engage with a respective one of the reference rails such that the
8 media storage device may be inserted into and removed from the data storage system housing by
9 slidably engaging the reference rails and the alignment grooves and guiding the media storage
10 device through the opening of the data storage system housing along a longitudinal axis of the
11 media storage device housing, the opposing ends of the media storage device housing being
12 located along the longitudinal axis, the data media being inserted into and removed from the
13 media storage device housing along an axis transverse to the longitudinal axis.

1 37. (Previously Presented) The data storage system of claim 36, wherein the media storage
2 device further comprises a locking plate attached to the media storage device housing and
3 configured to engage a locking mechanism located in the opening in the data storage system
4 housing.

1 38. (Previously Presented) The data storage system of claim 36, wherein the housing of the
2 media storage device is molded from plastic.

1 39. (Previously Presented) The data storage system of claim 36, wherein the media storage
2 device housing has opposing sides located between the top and the bottom and extending parallel
3 to the longitudinal axis, at least one of the opposing sides being configured to receive the data
4 media.

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1 40. (Previously Presented) The data storage system of claim 36, further comprising:
2 a spring mechanism comprising a first end and a second end, the first end being
3 operationally attached to the top of the media storage device housing; and
4 a finger attached to the second end of the spring mechanism;
5 wherein the spring mechanism and the finger are configured to engage the data media.

1 41. (Previously Presented) The data storage system of claim 36, wherein the media storage
2 device housing comprises a plurality of slots defined by a plurality of dividers positioned in
3 spaced-apart relation within the media storage device housing.

1 42. (Previously Presented) The data storage system of claim 40, wherein the spring
2 mechanism comprises a metallic strip.

1 43. (Previously Presented) The data storage system of claim 36, further comprising a drawer
2 to receive the media storage device, the drawer being moveable between a retracted position and
3 an extended position; and
4 guide rails to enable movement of the drawer between the retracted and extended
5 positions, the guide rails being separate from the reference rails.

1 44. (Previously Presented) The data storage system of claim 43, wherein the guide rails
2 comprise a first guide rail attached to the drawer, a second guide rail attached to the data storage
3 system housing, and a third guide rail slidably engaged to the first and second guide rails.

1 45. (Previously Presented) The data storage system of claim 43, wherein engagement of the
2 reference rails and respective alignment grooves lifts the media storage device from the drawer.

1 46. (Previously Presented) The data storage system of claim 45, wherein engagement of the
2 reference rails and respective alignment grooves when the drawer is in the retracted position
3 determines a position of the media storage device in the data storage system housing instead of
4 the drawer determining the position of the media storage device.

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1 47. (Previously Presented) The data storage system of claim 36, further comprising;
2 a moveable drawer to receive the media storage device; and
3 an automated drive system adapted to, in response to user input, move the drawer
4 between a retracted position to an extended position.

1 48. (Previously Presented) The data storage system of claim 47, wherein the drive system
2 has a motor to cause movement of the drawer.

1 49. (Previously Presented) The data storage system of claim 48, wherein the drive system
2 has a drive gear driven by the motor to cause movement of the drawer.

1 50. (Previously Presented) The data storage system of claim 36, further comprising a
2 moveable drawer to receive the media storage device, the drawer moveable between a retracted
3 position inside the data storage system housing and an extended position wherein the drawer
4 protrudes from the data storage system housing,
5 the drawer further comprising supplemental slots to store spare data media, the
6 supplemental slots separate from the media storage device.

1 51. (Previously Presented) The data storage system of claim 50, further comprising at least
2 another media storage device for storing a plurality of data media,
3 wherein the drawer has trays to receive respective media storage devices,
4 the supplemental slots being separate from the media storage devices.

1 52. (Previously Presented) The data storage system of claim 43, wherein the drawer and
2 media storage device are an integrated unit.

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1 53. (Previously Presented) The data storage system of claim 36, further comprising:
2 at least another media storage device for storing a plurality of data media,
3 the media storage devices stacked in a vertical stack arrangement; and
4 a plurality of moveable drawers to receive respective media storage devices, each drawer
5 moveable between a retracted position inside the data storage system housing and an extended
6 position wherein the drawer protrudes from the data storage system housing.

1 54. (Previously Presented) The data storage system of claim 36, further comprising:
2 at least another media storage device for storing a plurality of data media,
3 the media storage devices stacked in a vertical stack arrangement; and
4 a bulk access apparatus to provide single access to the plurality of media storage devices
5 arranged in the vertical stack arrangement.

1 55. (Previously Presented) The data storage system of claim 36, further comprising:
2 a media exchange device for moving the media storage device;
3 a first guide structure attached to the media exchange device;
4 a second guide structure attached to the data storage system housing, the second guide
5 structure to interact with the first guide structure to move the media exchange device,
6 wherein the reference rails and alignment grooves are separate from the guide structures.

1 56. (Previously Presented) The data storage system of claim 55, wherein the media exchange
2 device is integrated with the media storage device.

1 57. (Previously Presented) The data storage system of claim 36, wherein the media storage
2 device is for storing a plurality of machine-readable devices, each machine-readable device for
3 storing data.

1 58. (Previously Presented) The data storage system of claim 36, wherein the media storage
2 device has a plurality of slots to receive respective data media.

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1 59. (Previously Presented) The data storage system of claim 36, further comprising a second
2 media storage device for storing a plurality of data media, the second media storage device
3 having alignment grooves,
4 wherein the alignment grooves of the second media storage device are engageable by the
5 same reference rails.

1 60. (Previously Presented) A data storage system comprising:
2 a data storage system housing having an opening and reference structures;
3 a media storage device for storing a plurality of data media devices, the media storage
4 device having a housing with alignment structures to slidably engage the respective reference
5 structures to enable slidable movement of the media storage device through the opening of the
6 data storage system housing; and
7 a moveable media exchange device to receive the media storage device, the media
8 exchange device moveable between a retracted position and an extended position, wherein the
9 media storage device is positioned inside the data storage system housing when the media
10 exchange device is in the retracted position, and wherein the media storage device protrudes
11 from the data storage system housing when the media exchange device is in the extended
12 position; and
13 guide structures to moveably guide the media exchange device between the retracted and
14 extended positions.

1 61. (Previously Presented) The data storage system of claim 60, wherein the guide structures
2 are separate from the reference structures and alignment structures.

1 62. (Previously Presented) The data storage system of claim 61, wherein the media storage
2 device has a plurality of slots to receive respective data media devices.